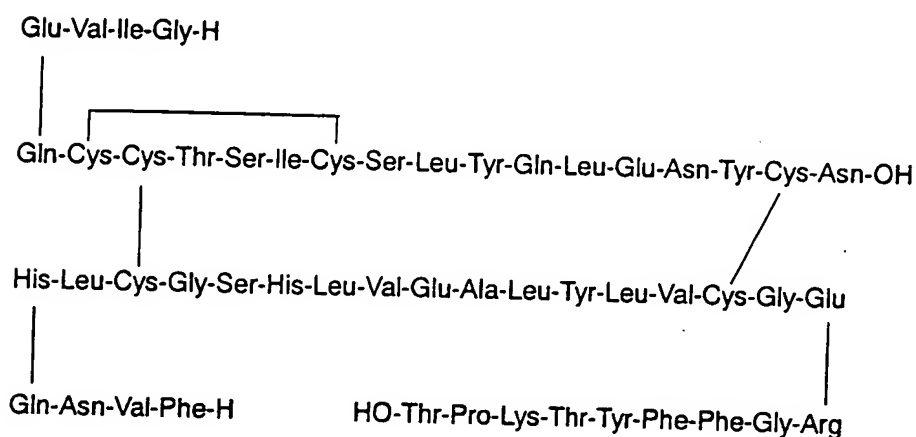


IN THE CLAIMS:

Please amend claims 2-20 as follows:

1. (Original) An insulin-administering device for percutaneously or transmucosally administering insulin lispro represented by the structural formula indicated below or a pharmaceutically acceptable salt thereof (hereinafter referred to as "insulin lispro"), using at least two different electric field-applying means.



2. (Currently Amended) The insulin-administering device according to claim 1, ~~characterized in that~~ wherein the two different electric field-applying means are iontophoresis and electroporation.

3. (Currently Amended) The insulin-administering device according to claim 2, ~~characterized in that~~ wherein the electric current applied during iontophoresis is between 0.01 and 1.0 mA/cm².

4. (Currently Amended) The insulin-administering device according to claim 2 ~~[[or 3]]~~, ~~characterized in that~~ wherein the voltage applied during electroporation is between 1 V/cm and 10 kV/cm.

5. (Currently Amended) The insulin-administering device according to ~~any one of claims~~ claim 1 ~~[[to 4]]~~, ~~characterized in that~~ wherein said insulin lispro is dissolved, suspended, or dispersed in a hydrophilic matrix.

6. (Currently Amended) The insulin-administering device according to claim 5, ~~characterized in that~~ wherein the hydrophilic matrix comprises one or more selected from the group consisting of agar, locust bean gum, xanthan gum, polyvinyl alcohols and derivatives thereof, and polyacrylic acid and salts thereof.

7. (Currently Amended) The insulin-administering device according to ~~any one of claims~~ claim 1 [[to 6]], ~~characterized in that~~ wherein said device comprises a membrane for controlling the release of said least one of the insulin lispros.

8. (Currently Amended) The insulin-administering device according to claim 7, ~~characterized in that~~ wherein at least a pair of electrodes used for electroporation is disposed on the release-controlling membrane.

9. (Currently Amended) The insulin-administering device according to claim 7 [[or 8]], ~~characterized in that~~ wherein the release-controlling membrane is formed of a porous membrane.

10. (Currently Amended) The insulin-administering device according to ~~any one of~~ claims claim 1 [[to 4]], ~~characterized in that~~ wherein said insulin lispro is retained on the membrane.

11. (Currently Amended) The insulin-administering device according to claim 10, ~~characterized in that~~ wherein said insulin lispro is retained in a dry state on the membrane and in that a part or all of said insulin lispro is dissolved when it is used.

12. (Currently Amended) The insulin-administering device according to ~~any one of~~ claims claim 2 [[to 11]], ~~characterized in that~~ wherein at least one of the electrodes used for electroporation is disposed directly on the skin or mucosa, or adjacent thereto.

13. (Currently Amended) An insulin-administering device, ~~characterized in that~~ wherein said device comprises an electroporation-iontophoresis formulation containing insulin lispro, a reference formulation that is a counter electrode in iontophoresis, and a power supply connected to both formulations.

14. (Currently Amended) The insulin-administering device according to claim 13, ~~characterized in that~~ wherein the power supply has a connecting port used for iontophoresis and a connecting port used for electroporation.

15. (Currently Amended) An electroporation-iontophoresis formulation, ~~characterized in that~~ wherein said formulation comprises a backing, an iontophoresis electrode disposed on the backing, an insulin lispro-containing layer which is disposed on the iontophoresis electrode and contains an insulin lispro, and electroporation electrodes which are disposed on the insulin lispro-containing layer and have polarities different from one another.

16. (Currently Amended) The electroporation-iontophoresis formulation according to claim 15, ~~characterized in that~~ wherein a release-controlling membrane for controlling the release of said insulin lispro is provided between the insulin lispro-containing layer and the electroporation electrodes.

17. (Currently Amended) The electroporation-iontophoresis formulation according to claim 16, ~~characterized in that~~ wherein the release-controlling membrane is a porous membrane having a pore size between 0.01 and 10 μm .

18. (Currently Amended) An electroporation-iontophoresis formulation, ~~characterized in that~~ wherein said formulation comprises a backing, an iontophoresis electrode disposed on the backing, a hydrophilic matrix base disposed on the iontophoresis electrode, a liner disposed on the hydrophilic matrix base, a retaining membrane which is disposed on the liner and retains an insulin lispro, and electroporation electrodes which are disposed on the retaining membrane and have polarities different from one another.

19. (Currently Amended) The electroporation-iontophoresis formulation according to claim 18, ~~characterized in that~~ wherein said insulin lispro is retained in a dry state on the retaining membrane.

20. (Currently Amended) The electroporation-iontophoresis formulation according to ~~any one of claims~~ claim 15 ~~[[to 19]]~~, ~~characterized in that~~ wherein the electroporation electrodes are formed as a multipoint contact-type.